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REPORT ON SHORTHAND TEST, FORM C

In an effort to refine the present test batteries to the degree most effective for handling ever-larger groups of applicants, the Testing Section directed its research toward the development of a Shorthand test which would incorporate the following features:

1. Equality in discrimination of ability with the Shorthand test currently used.

2. More rapid and objective scoring techniques which would be particularly valuable for expeditious reporting of test results.

3. Simplification of interpretation of test results, achieved by equating maximum possible scores on all letters dictated.

4. Alleviation of supply problems by reduction of reproduction work required for renewing test supply.

It was decided that a thorough revision of the present Shorthand test would be most likely to fulfill the above requirements. The procedures followed in developing the new test are outlined below.

PROCEDURES FOR DEVELOPMENT OF FORM C

Shorthand Test, Form C, was designed as a multiple-choice test. The dictation material itself was adopted in its entirety from Form A as a control for point #1 above. The dictation material, as in Form A, is divided into three letters dictated at 60 words per minute, 80 words per minute, and 100 words per minute respectively. Dictation is taken in the regular manner, and applicants are asked to choose, by referring to their shorthand notes, the correct words to fill in for omitted words in a printed transcription. They are given several words from which to select the correct word for each omission. A short practice letter is dictated first and is done in the same way as the test. The multiple-choice item format was selected for its adaptability to stencil scoring, which is quite rapid and entirely objective. (See #2 above). The maximum raw score possible on each letter was set at 50 to simplify interpretation of reports of shorthand scores by Placement and Procurement Officers. (See #3 above).

Since the new form can be used with separate answer sheet forms, the Shorthand booklets may be used again and again, thereby reducing costs and difficulties of an extensive reproduction job each time the supply needs replenishing. (See #4 above).

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Alternatives for each item were selected, insofar as was possible, from a compilation of errors made on each item by approximately 200 people taking Shorthand Form A. No alternative was selected unless its meaning fitted the context of the letter and its Shorthand symbol appeared similar to that of the Gregg symbol for the correct word. A "none-of-these" alternative was included in each item as a control for guessing, and was keyed as the correct answer in the proportion of questions allowed by the probability value. This test, of course, is designed primarily for those who use the Gregg system of Shorthand.

CORRELATION STUDY

Correlation studies were made between scores on each letter of Shorthand Test Form C and scores on each corresponding letter of Shorthand Test Form B. The total number of subjects was 48, composed entirely of stenographers in the Personnel Clerical Pool, grades GS-4, GS-5, and GS-7. Only Form B of the shorthand test was used in the correlation study with Form C in an effort to exclude extraneous variability, such as recall of any words if Form A had been taken previously. All of the subjects had taken Form B as applicants from one to six months prior to taking Form C. The sample of 48 persons is adequate, since correlation coefficients stabilized at this point. Correlations were run with numbers of 21, 30, 37, and 48, and the trend was always toward a higher correlation.

A. Correlation coefficients between Form B and Form C are as follows:

Letter I	-.702
Letter II	±.745
Letter III	±.858

Statistical treatment of these correlation coefficients proves them to be significantly higher than they would be through chance factors alone, and gives evidence that the relationship between the two forms is sufficiently close to warrant consideration of them as equivalent forms.

B. An analysis of the two distributions of all three letters follows:

	Means		Standard Deviations	
	Form B	Form C	Form B	Form C
Letter I	42.6	40.6	7.54	5.97
Letter II	39.3	38.1	9.71	8.15
Letter III	32.7	33.6	8.07	8.35

The average scores on the three letters of both forms of the test differ by two points or less. The standard deviations differ by 1.57 points or less showing very similar variability in the two distributions.

C. Reliability coefficients for the three letters on Form C were computed using an odd-even method with the Spearman-Brown correction for attenuation. They are as follows:

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	Form C
Letter I	+.911
Letter II	+.917
Letter III	+.896

CONCLUSIONS

1. Correlation coefficients between Form B and Form C are sufficiently high and means and standard deviations are sufficiently close to regard the two forms of the test as equally discriminating with our population. Reliability coefficients are significantly high, indicating that the Form C test may be used with confidence in its consistency.

2. Shorthand Test Form C meets the requirements of objective and rapid scoring, and shorter administration time.

3. Shorthand Test Form C will be introduced into the regular test battery for applicants and employees as soon as is feasible.

4. A study to determine the relationship between Shorthand Test Form C and a written transcription of the dictation material will be started immediately to establish experimentally the validity of this objective method for measuring the shorthand skill.

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